

June 27, 1933

Tentative Classification of Building Construction

with reference to Fire Resistance

The types of construction in use are divided into grades and classes, depending on the general design. Within each grade or class there will be a large range in fire resistance, depending on the details used and the properties of the materials employed, but each grade or class is so chosen that with the most suitable materials and details it will develop a higher degree of resistance than the succeeding grade or class.

By fire resistance is meant the ability to withstand fire exposure from without and fire within, with no collapse and minimum amount of damage, also such properties as tend to prevent starting and spread of fire within, and also such as will make the building a fire barrier in case of a general conflagration.

Class 1. - The details are the same as for Class 1, Grade A.

Grade A

Class 2. - The details are the same as for Class 2, Grade A.

This grade has solid, incombustible, fire resistive exterior, party, fire, and division walls, incombustible solid or hollow room and corridor partitions, and solid, incombustible, fire resistive floor and roof construction. Walls may be furred and ceilings may be suspended from the floor construction when desired, using incombustible materials applied. Party, division and fire walls may be solid or hollow walls of the types described.

The floor loads may be supported on bearing walls or wall and floor loads may be supported by protected rolled steel, cast iron or reinforced concrete framing. The wall material may be brick, concrete, stone, or equivalent and the floor and roof material any incombustible material formed in solid units or slabs that has the necessary strength and fire resistance.

All vertical openings are to be suitably enclosed to prevent passage of fire. Other equivalent to not less than one-inch plate or metal lath. Details same as for Class 1 of Grade A.

Class 1. - Buildings in this class conform with the above requirements and have incombustible top or finish floors and roof, partition, supports, door and window frames and sash, with wired glass except where there is no exposure from adjacent buildings or occupancies where plain glass may be used. Doors and shutters may be metal, hollow or solid, or of wood metal covered. Where used in fire or division walls, or where severe exterior or interior exposure is to be provided against, they shall meet the requirements for fire doors and shutters. Minor interior trim may be of wood. Details are the same as for Class 2 of Grade A.

Class 2. - Buildings in this class conform with the general



June 27, 1933

Tentative Classification of Building Construction  
with reference to Fire Resistance

The types of construction in use are divided into grades and classes, depending on the general design. Within each grade or class there will be a large range in fire resistance, depending on the details used and the properties of the materials employed, but each grade or class is so chosen that with the most suitable materials and details it will develop a higher degree of resistance than the preceding grade or class.

By fire resistance is meant the ability to withstand fire exposure from without and fire within, with no collapse and minimum amount of damage, also such properties as tend to prevent starting and spread of fire within, and also such as will make the building a fire barrier in case of a general conflagration.

Grade A

This grade has solid, incombustible, fire resistant exterior party, live, and division walls, incombustible solid or hollow room and corridor partitions, and solid, incombustible, fire resistant floor and roof construction. Walls may be turned and ceilings may be suspended from the floor construction when desired, using incombustible materials.

The floor loads may be supported on bearing walls or wall and floor loads may be supported by protected rolled steel, cast iron or reinforced concrete framing. The wall material may be brick, concrete, stone, or equivalent and the floor and roof material any incombustible material formed in solid units or slabs that has the necessary strength and fire resistance.

All vertical openings are to be suitably enclosed to prevent passage of fire.

Class 1. - Buildings in this class conform with the above requirements and have incombustible top or finish floors and roof, partition, supports, door and window frames and sash, with wired glass except where there is no exposure from adjacent buildings or occupancies where plain glass may be used. Doors and supports may be metal, hollow or solid, or of wood metal covered. Where used in fire or division walls, or where severe exterior or interior exposure is to be provided against, they shall meet the requirements for fire doors and shutters. Minor interior trim may be of wood.

Class 2. - Buildings in this class conform with the general



requirements for Grade A, and have combustible top or finish floors, partition supports, door and window frames and sash, with plain glass, except where exposure from adjacent buildings or occupancies is to be provided for, when the minimum protection shall be metal door and window frames and sash with wired glass, where glass is used, or the openings may be completely protected by automatically operated shutters.

#### Grade B

Buildings in this grade have hollow, incombustible and fire resistive exterior walls and solid or hollow party, fire and division walls. Walls shall be of such thickness and design as will meet the requirements of the given use. They may be of brick, fire resistive hollow tile, concrete blocks or units, slabs cast in place with an air space, or equivalent. The floor and roof construction may be solid or hollow, cast in place or built of units. Other general features are the same as for Grade A.

Class 1. - The details are the same as for Class 1, Grade A.

Class 2. - The details are the same as for Class 2, Grade A.

#### Grade C

Exterior walls are hollow or solid and consist of incombustible framing on which incombustible lath and plaster, sheet metal, or other incombustible sheathing is applied. Party, division and fire walls may be solid or hollow walls of the types described under Grades A and B, or of the same type as the exterior walls, provided they are made adequate for the given use.

The floor and roof construction has incombustible framing, the structural portions being of incombustible material, and may be built hollow or solid.

Class 1. - All metal framing, sheathing, and structural members have protection equivalent to not less than one-inch plaster on metal lath. Other details same as for Class 1 of Grade A.

Class 2. - All metal framing, sheathing, and structural members have protection equivalent to not less than one-inch plaster on metal lath. Other details same as for Class 2 of Grade A.

Class 3. - Metal framing, sheathing and structural members are unprotected. Other details same as for Class 1 of Grade A.

Class 4. - Metal framing, sheathing and structural members are unprotected. Other details are the same as for Class 2 of Grade A.



requirements for Grade A, and have combustible top or finish floors, partition supports, door and window frames and sash, with plain glass, except where exposure from adjacent buildings or occupancies is to be provided for, when the minimum protection shall be metal door and window frames and sash with wired glass, where glass is used, or the openings may be completely protected by automatically operated shutters.

### Grade B

Buildings in this grade have hollow, incombustible and fire resistant exterior walls and solid or hollow party, fire and division walls. Walls shall be of such thickness and design as will meet the requirements of the given use. They may be of brick, fire resistant hollow tile, concrete blocks or units, also cast in place with an air space, or equivalent. The floor and roof construction may be solid or hollow, cast in place or built of units. Other general features are the same as for Grade A.

Class 1. - The details are the same as for Class 1, Grade A.

Class 2. - The details are the same as for Class 2, Grade A.

### Grade C

Exterior walls are hollow or solid and consist of incombustible framing in which incombustible lath and plaster, sheet metal, or other incombustible sheathing is applied. Party, division and fire walls may be solid or hollow walls of the types described under Grades A and B, or of the same type as the exterior walls, provided they are made adequate for the given use.

The floor and roof construction has incombustible framing, the structural portions being of incombustible material, and may be built hollow or solid.

Class 1. - All metal framing, sheathing, and structural members have protection equivalent to not less than one-inch plaster on metal lath. Other details same as for Class 1 of Grade A.

Class 2. - All metal framing, sheathing, and structural members have protection equivalent to not less than one-inch plaster on metal lath. Other details same as for Class 2 of Grade A.

Class 3. - Metal framing, sheathing and structural members are unprotected. Other details same as for Class 1 of Grade A.

Class 4. - Metal framing, sheathing and structural members are unprotected. Other details are the same as for Class 2 of Grade A.



### Grade D

Buildings in this grade have solid or hollow exterior, division, party and fire walls of incombustible and fire resistive material. Walls must be of design and thickness to meet the requirements of the intended use, and may be of brick, hollow tile, concrete block, or equivalent. The floor and interior construction consists of solid, heavy timber framing, supporting solid heavy wooden floor and roof built without concealed air spaces. Metal framing where used shall be properly protected. Layers of asbestos or other incombustible felt are to be placed between the finish and structural floor. The roofing is to be of incombustible or fire retardant type. Partitions may be of solid timber, plaster on incombustible lath and studs, or equivalent. Door and window frames and sash may be of wood with plain glass, except where exposure from adjacent buildings or occupancies is to be provided for, when the minimum protection shall be metal door and window frames and sash with wired glass, where glass is used, or the openings may be completely protected by automatically operated shutters. Doors may be of wood except where used in fire or division walls, or where severe exterior or interior exposure is to be provided for, when they shall meet the requirements for fire doors or shutters.

All vertical openings are to be properly enclosed to prevent passage of fire.

Class 1. - Buildings in this class conform with the general requirements of Grade D, and have all metal connections between columns, girders, beams and walls properly protected or made of incombustible fire resistive material.

Class 2. - The buildings conform with the general requirements and have exposed metal connections between columns, girders, beams, and walls, when they shall be of design and material to properly protect the opening.

### Grade E

Buildings in this grade have solid or hollow exterior, division, party, and fire walls of incombustible and fire resistive material. Walls must be of design and thickness to meet the requirements of the intended use, and may be of brick, hollow tile, concrete block, or equivalent. The floor and interior construction consists of light wooden framing with facings forming an air space between them. Suitable protection must be applied over and around heating plants, rooms used for fuel storage, or similar occupancy, and separations provided between chimneys and the wooden construction. Door and window frames and sash may be of wood with plain glass except where exposure from adjacent buildings or occupancies is to be provided for, when door and window frames and sash shall be of metal with wired glass, where glass is used, or the openings may be completely protected by automatically operated shutters. Doors may be of wood except where used in fire or division walls, or where severe exposure



### Grade D

Buildings in this grade have solid or hollow exterior, division, party, and fire walls of incombustible and fire resistive material. Walls must be of design and thickness to meet the requirements of the intended use, and may be of brick, hollow tile, concrete block, or equivalent. The floor and interior construction consists of solid, heavy timber framing, supporting solid heavy wooden floor and roof built without concealed air spaces. Metal framing where used shall be properly protected. Layers of asbestos or other incombustible felt are to be placed between the fire and structural floor. The ceiling is to be of incombustible or fire retardant type. Partitions may be of solid timber, plaster on incombustible lath and studs, or equivalent. Door and window frames and sash may be of wood with plain glass, except where exposure from adjacent buildings or occupancies is to be provided for, when the minimum protection shall be metal door and window frames and sash with wired glass, where glass is used, or the opening may be completely protected by automatically operated shutters. Doors may be of wood except where used in fire or division walls, or where severe exterior or interior exposure is to be provided for, when they shall meet the requirements for fire doors or shutters.

All vertical openings are to be properly enclosed to prevent passage of fire.

Class I. - Buildings in this class conform with the general requirements of Grade D, and have all metal connections between columns, girders, beams and walls properly protected or made of incombustible fire resistive material.

Class 2. - The buildings conform with the general requirements and have exposed metal connections between columns, girders, beams, and walls.

### Grade E

Buildings in this grade have solid or hollow exterior, division, party, and fire walls of incombustible and fire resistive material. Walls must be of design and thickness to meet the requirements of the intended use, and may be of brick, hollow tile, concrete block, or equivalent. The floor and interior construction consists of light wooden framing with facing forming an air space between them. Suitable protection must be applied over and around heating plants, rooms used for fuel storage, or similar occupancy, and separations provided between chimneys and the wooden construction. Door and window frames and sash may be of wood with plain glass except where exposure from adjacent buildings or occupancies is to be provided for, when door and window frames and sash shall be of metal with wired glass, where glass is used, or the opening may be completely protected by automatically operated shutters. Doors may be of wood except where used in fire or division walls, or where severe



exterior or interior exposure is to be provided for, when they shall meet the requirements for fire doors.

Class 1. - Conforms with the general requirements of Grade E and has interior finish of plaster on incombustible lath or equivalent, and incombustible or fire retardant roof covering, all hollow spaces being fire stopped at floor and roof lines with incombustible material.

Class 2. - Conforms with the general requirements of Grade E and has interior finish of plaster on wood lath, gypsum wall board, or equivalent, and has incombustible or fire retardant roof covering, all hollow spaces being fire stopped at floor and roof lines with incombustible material.

Class 3. - Conforms with the general requirements of Grade E and has interior finish of plaster on wood lath, gypsum wall board, or equivalent, and combustible roof covering, all hollow spaces being fire stopped at floor and roof lines with 2-inch plank or equivalent.

Class 4. - Conforms with the general requirements of Grade E and has interior finish of wood, pulp board, or similar combustible material, and combustible roof covering.

#### Grade F

Buildings in this grade have exterior wall framing of wood faced on the outside with masonry veneer, stucco or similar incombustible material. Party, division, and fire walls are to be of solid or hollow masonry or equivalent incombustible and fire resistive construction of design and thickness to meet the required use, except that for double residences party or division walls may be of wood or metal studs with metal lath and plaster. Doors, frames and sash may be of wood with plain glass, except as used in party, division, and fire walls, when they shall be of design and material to properly protect the opening.

The ~~same~~ interior construction is of wood stud and joists with hollow spaces between facings. Suitable protection must be applied over and around heating plants, rooms used for fuel storage, or similar occupancy, and separation provided between chimneys and the wooden construction.

Class 1. - Conforms with the general requirements of Grade F and has interior finish of plaster on incombustible lath or equivalent, and incombustible or fire retardant roof covering, all hollow spaces being fire stopped at floor and roof lines with incombustible material.

Stucco, if used, is to be on incombustible lath.

Class 2. - Conforms with the general requirements of Grade F and has interior finish of plaster on wood lath, gypsum wall board, or



exterior or interior exposure is to be provided for, when they shall meet the requirements for life doors.

Class 1. - Conforms with the general requirements of Grade 2 and has interior finish of plaster on incombustible lath or equivalent, and incombustible or fire resistant roof covering. All hollow spaces being fire stopped at floor and roof lines with incombustible material.

Class 2. - Conforms with the general requirements of Grade 2 and has interior finish of plaster on wood lath, gypsum wall board, or equivalent, and has incombustible or fire resistant roof covering. All hollow spaces being fire stopped at floor and roof lines with incombustible material.

Class 3. - Conforms with the general requirements of Grade 2 and has interior finish of plaster on wood lath, gypsum wall board, or equivalent, and combustible roof covering. All hollow spaces being fire stopped at floor and roof lines with 2-inch plank or equivalent.

Class 4. - Conforms with the general requirements of Grade 2 and has interior finish of wood, pulp board, or similar combustible material, and combustible roof covering.

#### Grade 1

Buildings in this grade have exterior wall framing of wood faced on the outside with masonry veneer, stone or similar incombustible material. Party, division, and fire walls are to be of solid or hollow masonry or equivalent incombustible and fire resistant construction of design and thickness to meet the required use, except that for double residences party or division walls may be of wood or metal studs with metal lath and plaster. Doors, frames and sash may be of wood with plain glass, except as used in party, division, and fire walls, when they shall be of design and material to properly protect the opening.

The interior construction is of wood stud and joists with hollow spaces between rafters. Suitable protection must be applied over and around heating plants, rooms used for fuel storage, or similar occupancy, and separation provided between chimneys and the wooden construction.

Class 1. - Conforms with the general requirements of Grade 1 and has interior finish of plaster on incombustible lath or equivalent, and incombustible or fire resistant roof covering. All hollow spaces being fire stopped at floor and roof lines with incombustible material. It may be of wood with plain glass, except as used in party, division, and fire walls, when they shall be of design and material to properly protect the opening.

Class 2. - Conforms with the general requirements of Grade 1 and has interior finish of plaster on wood lath, gypsum wall board, or equivalent, and combustible roof covering. All hollow spaces being fire stopped at floor and roof lines with 2-inch plank or equivalent.



equivalent, and has incombustible or fire retardant roof covering, all hollow spaces being fire stopped at floor and roof lines with incombustible material.

Stucco, if used, is to be on incombustible lath.

Class 3. - Conforms with the general requirements of Grade F and has interior finish of plaster on wood lath, gypsum wall board, or equivalent, and combustible roof covering, all hollow spaces being fire stopped at floor and roof lines with 2-inch plank or equivalent.

Stucco, if used, may be on wood lath.

Class 4. - Conforms with the general requirements of Grade F and has interior finish of wood, pulp board, or similar combustible material, and combustible roof covering.

Stucco, if used, may be on wood lath.

### Grade G

Buildings of this grade have exterior wall framing of wood faced on the outside with boards or other combustible finish. Party, division, and fire walls are to be of solid or hollow masonry or equivalent incombustible and fire resistive construction of design and thickness to meet the required use, except that for double residences party or division walls may be of wood or metal studs with metal lath and plaster. Doors, frames, and sash may be of wood with plain glass, except as used in party, division, and fire walls, when they shall be of design and material to properly protect the openings.

The interior construction is of wood stud and joists with the hollow space between facings. Suitable protection must be applied over and around heating plants, rooms used for storage of fuel, or similar occupancy, and separation provided between chimneys and the wooden construction.

Class 1. - Conforms with the general requirements of Grade G and has interior finish of plaster on incombustible lath or equivalent, and incombustible or fire retardant roof covering, all hollow spaces being fire stopped at floor and roof lines with incombustible material.

Class 2. - Conforms with the general requirements of Grade G and has interior finish of plaster on wood lath, gypsum wall board, or equivalent, and has incombustible or fire retardant roof covering, all hollow spaces being fire stopped at floor and roof lines with incombustible material.

Class 3. - Conforms with the general requirements of Grade G and has interior finish of plaster on wood lath, gypsum wall board or equivalent, and combustible roof covering, all hollow spaces being fire stopped at floor and roof lines with 2-inch plank or equivalent.

Class 4. - Conforms with the general requirements of Grade G and has interior finish of wood, pulp board, or similar combustible material, and combustible roof covering.



...and the interior of the ...  
...the ...  
...the ...

Class 2. - Conforms with the general requirements of Grade 2 and ...  
...the ...  
...the ...

Class 3. - Conforms with the general requirements of Grade 3 and ...  
...the ...  
...the ...

### Grade 4

...the ...  
...the ...  
...the ...

...the ...  
...the ...  
...the ...

Class 1. - Conforms with the general requirements of Grade 1 and ...  
...the ...  
...the ...

Class 2. - Conforms with the general requirements of Grade 2 and ...  
...the ...  
...the ...

Class 3. - Conforms with the general requirements of Grade 3 and ...  
...the ...  
...the ...

Class 4. - Conforms with the general requirements of Grade 4 and ...  
...the ...  
...the ...







